

### REMARKS

Applicants propose placing claims 4, 15 and 16 into independent form. Applicants note with appreciation the Examiner's indication at page 4 of the Office Action that claims 15 and 16 contain allowable subject matter. It is believed that the Examiner intended to also include claim 4 insofar as the Examiner, in providing a statement of reasons for allowance, suggested that "Tang et al. fails to teach or suggest the claim combination of a Ti orientation enhancement layer...". Because neither claims 15 or 16 include recitation of Ti as a material, it is believed the Examiner was likely referring to the recitations of claims 4 wherein the perpendicular orientation promoting underlayer is formed of Ti or Ti alloy. Additionally, claim 4 is not rejected over prior art. The currently applied reference, the *Tang et al.* patent, discloses a NiFe soft magnetic keeper layer 31 having a depth great than 100 nm. See column 9, line 25. In light of these facts, it is respectfully submitted that claim 4 is allowable over the prior art of record for reasons of record.

The final Office Action includes a rejection of claims 1-3, 5, 6 and 8 under 35 U.S.C. §102(b) as allegedly being anticipated by the *Tang et al.* patent (U.S. Patent 5,750,270) and a rejection of claim 7 under 35 U.S.C. §103 as allegedly being unpatentable over the *Tang et al.* patent in view of the *Haratani et al.* patent (U.S. Patent 6,420,058). These rejections are respectfully traversed.

In the characterization of the *Tang et al.* patent, the Office suggests that it discloses a magnetic recording medium having a "perpendicular orientation promoting layer" which is identified as the NiFe keeper layer. Applicants respectfully disagree with this characterization of the NiFe keeper layer. As disclosed at various

locations and with particularity at column 9, lines 9-21, of the *Tang et al.* patent the keeper layer is a soft magnetic material the examples of soft magnetic materials include NiFeMo, NiFeMoCu, and other soft alloys such as Fe, FeAlSi, FeNiO, FeN<sub>x</sub>FeTi, FeSiB, FeBC, FeAl, CoVFe, CoTa, CoZr, CoNbZr, CoTi, CoNbTa, CoNiZr, FeNiP, NiFeMo, NiFeCuMo and FeCoZr. None of these represent a perpendicular orientation promotion layer, which the present application identifies as Ti, for example. Ti is not a soft magnetic material. It is respectfully submitted that a soft magnetic material, particularly the examples listed in column 9, cannot be fairly characterized as a perpendicular orientation promotion layer. There is no evidence of record that these materials could operate as a perpendicular orientation promotion layer.

The Office suggests that the keeper layer is "capable of functioning in the claimed capacity." Applicants respectfully disagree. First, there is no evidence of record that this is the case. Second, soft magnetic layers have a well known use in the art and in fact the incorporation of a soft magnetic layer, separate and apart from the perpendicular orientation promotion underlayer, represents two of the specific embodiments disclosed in the present application. The Examiner has indicated claims covering these additional embodiments are patentable. These embodiments, such as shown in Examples 4-11 specifically disclose an NiFe alloy soft magnetic layer to create a double layer PMR disk, for example.

In light of the foregoing, it is evident that the NiFe soft magnetic layer, also called a keeper layer, in the *Tang et al.* patent is not capable of performing as a

perpendicular orientation promoting underlayer and therefore the *Tang et al.* patent does not anticipate claim 1.

In light of the foregoing, Applicants respectfully request entry of the foregoing changes to the claims and allowance of the above-captioned application. Should any residual issues exist, the Examiner is invited to contact the undersigned at the number listed below.

Respectfully submitted,

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